DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024242
Date Inspected: 02-Jun-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	See Report Below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP) groove welds of the East and West Orthotropic Box Girders (OBG's) and the Tower. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) and the Flux Cored Arc Welding (FCAW) processes as per the Welding Procedure Specifications (WPS's).

A). Bike Path

The QAI observed ABF personnel David Lucero ID-2490 perform the welding of the threaded studs to the cantilevered supports beams. The stud welding was performed utilizing the WPS identified as ABF-WPS-D15-5001-Stud which was also used by the QC inspector, William Sherwood, to monitor the welding and to perform a preproduction test as per the contract documents. The welding and the inspection was performed on the cantilever beams located between PP9 and PP31.

B). Retrofit of Plate "B"@ Barrier Connection

The QAI observed the QC inspector, Fred Von Hoff, perform a visual weld inspection and a Magnetic Particle Test (MPT) of the fillet weld on the 10 mm plate. The inspection and testing was performed on the type "B" barrier connection assembly located on the E8 OBG along grid line E2 at PP68.75 and PP69.25 and along the E5 grid line at PP62.75, PP63.75 and PP68.25. The inspection and testing performed by the QC inspector appeared to

comply with contract documents. The work performed complies with the contract documents and in reference with RFI No. ABF-RFI-001985R01. The inspection and testing was completed during this shift and the QAI concurs with QC's assessment.

C). Tower Splice Plates

The QAI observed the fillet welding of the southwest corner closure splice plate located at the 114 meter elevation of the South Tower Shaft. The welding was performed by Salvador Sandoval ID-2202 utilizing the FCAW as per the WPS identified as ABF-WPS-D15-F2200-3. The inspection was performed by William Sherwood utilizing the WPS to monitor and verify the welding parameters. The in process welding appeared to comply with the contract specifications.

D). Pipe Supports

The QAI observed the fit-up and tack welding of the pipe supports identified as PS-1 to the sole plates on the E6 OBG located approximately along the grid line E6. The tack welding was performed by Rick Kiikvee utilizing the WPS identified as Fillet Murex. The inspection of the in progress work performed by Steve Jensen appeared to comply with the contract documents.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the flat, vertical and overhead positions utilizing the E7018-H4R low hydrogen and E71T-1-1M. The 3.2 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The WPS's were also utilized by the QC inspector's as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs on page 3 of this report illustrate some of the work observed during this scheduled shift.

WELDING INSPECTION REPORT

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Summary of Conversations:

There were general conversations with Lead Inspector Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer